BEFORE THE
POSTAL REGULATORY COMMISSION
WASHINGTON, D.C. 20268-0001

RETAIL GROUND AND PARCEL SELECT GROUND
SERVICE STANDARD CHANGES, 2022

Docket No. N2022-1

DIRECT TESTIMONY OF
A. THOMAS BOZZO
ON BEHALF OF THE
UNITED STATES POSTAL SERVICE

(USPS-T-3)

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AUTOBIOGRAPHICAL SKETCH

1   My name is A. Thomas Bozzo. I am a Vice President with Laurits R. Christensen

2 Associates (LRCA), which is an economic research and consulting firm located in

3 Madison, Wisconsin. My education includes a B.A. in economics and English from the

4 University of Delaware, and a Ph.D. in economics from the University of Maryland-

5 College Park. My major fields were econometrics and economic history, and I also

6 completed advanced coursework in industrial organization. In the 1995-1996 academic

7 year, I taught undergraduate microeconomics and statistics at Maryland, and monetary

8 economics at the University of Delaware. I joined LRCA as an Economist in June 1996,

9 was promoted to Senior Economist in January 1997, and to my present position in

10 January 2003.

11   Much of my work at LRCA has dealt with theoretical, statistical, and

12 measurement issues related to Postal Service costing, particularly for mail processing.

13 My current responsibilities include supervising production of Cost Segment 3 (Clerk and

14 Mail Handler) cost inputs to the Postal Service's Cost and Revenue Analysis and of

15 labor productivity data for mail processing operations provided in the Annual

16 Compliance Report (ACR). I presented testimony related to costing and data systems

17 in the Docket Nos. R2000-1, R2001-1, R2005-1, and R2006-1 rate cases. In addition to

18 numerous other projects for the Postal Service, I managed projects related to the

19 demand for market dominant products and service-related mail processing costs for

20 USPS Office of Inspector General (OIG). I have also worked on economic and

21 econometric analysis projects for the telecommunications, freight railroad, electricity,

22 and natural gas distribution industries.

PURPOSE OF TESTIMONY

1 **PURPOSE OF TESTIMONY**

2   The purpose of my testimony is to describe the methodology that the Postal

3 Service has used to estimate the expected mail processing and transportation cost

4 changes resulting from the planned changes in service standards. I will also present

5 the overall estimated change in cost.

1 **ASSOCIATED LIBRARY REFERENCES**

2   I sponsor the following public USPS Library Reference that is associated with my

3 testimony:

4   USPS-LR-N2022-1-1

5   I sponsor the following non-public USPS Library Reference that is associated

6 with my testimony:

7   USPS-LR-N2022-1-NP3.

1 **I.   ESTIMATED COST IMPACTS FROM SERVICE CHANGES**

2 **A. Methodology for Estimating the Cost Impact Caused by the Planned**

3 **Change in Service Standards**

4   The purpose of this section is to describe the methodology used to estimate the

5 potential annual cost impact from the planned changes in Parcel Select Ground (PSG)

6 and Retail Ground (RG) service standards.

7   Witness Bray (USPS-T-2) describes the current PSG and RG mail flows and

8 changes to PSG and RG mail processing and transportation that will implement the

9 planned service changes. These changes involve processing and transporting PSG

10 and RG with First-Class Package Service (FCPS).

11   While improving service standards for PSG and RG might be expected to

12 increase costs, other things equal, the operational implementation described by witness

13 Bray has potential sources of cost efficiencies. Notably, moving PSG and RG pieces to

14 the FCPS mail stream as described may reduce mail processing costs on net by

15 reducing or eliminating "touches" of PSG and RG in the Network Distribution Center

16 (NDC) network. The relatively small addition of workload from PSG and RG volumes

17 should have negligible effects on existing processing of FCPS and other parcel products

18 in plants.

19   Transportation impacts result from mode shifts required to meet the planned

20 service standards. Some high-zone PSG and RG pieces currently transported by

21 surface modes will require FedEx Day Turn air transportation to meet the planned

22 service standards. Relatedly, some FCPS will shift from commercial flights to FedEx

1   Day Turn transportation since mixed FCPS, PSG, and RG pieces will include parcels

2   exceeding weight limits for commercial air transportation.

3   To estimate cost impacts from the operational changes, I compare mail

4   processing and transportation costs for PSG and RG based on current mailflows to

5   estimated costs for mailflows under the planned service standards. Costs representing

6   the current PSG mailflows are available using Commission-accepted methodology from

7   models provided in the Postal Service's Annual Compliance Report (ACR), folders

8   USPS-FY21-NP15 (mail processing) and USPS-FY21-NP16 (transportation).

9   Mail processing costs for the future state can be estimated by modifying the

10   USPS-FY21-NP15 PSG models from the ACR to reflect FCPS mailflows. The modified

11   models are provided in USPS-N2022-1-NP3. The PSG mail processing models also

12   are the best available basis for estimating cost impacts for RG. As described by

13   witness Bray, the mail processing flows for RG in both the current and future states are

14   identical to the PSG flow for pieces entered at post offices. Thus, the PSG mail

15   processing and transportation models may be adapted to estimate the change in RG

16   mail processing costs. Since the combined PSG and RG volume is small relative to

17   FCPS, I assume that effects on FCPS mail processing costs from adding PSG and RG

18   to the FCPS mailflows are negligible. Multiplying the unit cost differences by PSG and

19   RG volumes provides the volume variable cost (VVC) impact, excluding any effects of

20   volume changes induced by the service standard changes.

21   The transportation cost impacts are obtained by computing transportation costs

22   per cubic foot in the current state for FCPS, PSG, and RG pieces that would change

23   modes under the planned standards. Current-state costs are commercial air costs for

1   FCPS, and surface transportation costs from USPS-FY21-NP16 for PSG and RG. The

2   future state cost per cubic foot is for FedEx Day Turn transportation. Similar to the mail

3   processing calculations, the transportation cost impacts are derived by multiplying the

4   cost differentials by the cubic feet of FCPS, PSG, and RG that would change

5   transportation modes.

6   **B. Cost Changes Arising from the Changes in Service Standards**

7   **i. Mail Processing Cost Changes**

8   The FCPS mailflows that PSG and RG pieces will follow under the planned

9   service standards, described by witness Bray, differ from current PSG and RG mailflows

10   primarily in that FCPS mail processing and distribution is largely carried out at

11   Processing and Distribution Centers (P&DCs) rather than Network Distribution Centers

12   (NDCs). The modified PSG models accordingly include distribution handlings at origin

13   and destination P&DCs.[1] The distribution handlings replace crossdock handlings in the

14   current mailflow for pieces distributed in the P&DCs. While most outgoing FCPS pieces

15   are processed and distributed at P&DCs, NDCs process some FCPS. I estimate the

16   portion of FCPS that flows to NDCs using ODIS volume data. The FCPS fraction of

17   pieces flowing to NDCs is assumed to be processed as in the existing PSG model

18   through the origin NDC. FCPS pieces are sorted at origin to destinating P&DCs and

19   thus bypass destination NDC and ASF handling.

20   The P&DC distribution handlings for machinable PSG pieces are assumed to be

21   attempted on automated processing equipment—including the Automated Parcel and

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[1] Since oversize pieces are a very small share of volume for both PSG and RG, I do not modify the PSG
Oversize model for this exercise. The estimated cost impacts are not sensitive to changes in Oversize
costs.

1   Bundle Sorter (APBS), Automated Package Processing System (APPS), and/or the

2   Small Package Sorting System (SPSS)—where available. Manual distribution is

3   assumed for pieces over 20 pounds, non-machinable pieces, and automation rejects.

4   To estimate labor productivities for automated P&DC parcel distribution operations, I

5   combine Management Operating Data System (MODS) data for APBS, APPS, and

6   SPSS operations defined for "FCM SPRS" (First-Class Mail small parcel and rolls)

7   processing (MODS 37x) with corresponding "Priority Mail" operations, distinguishing

8   outgoing from incoming productivities. This productivity estimate is used for two

9   reasons. First, a productivity differential between the MODS 37x operations and other

10   automated parcel processing at P&DCs is likely due, at least in part, to the small size of

11   FCPS pieces. Small FCPS piece size can increase productivities by reducing container

12   handlings within sorting operations. Thus, the MODS 37x productivities may not be

13   directly applicable to larger machinable PSG and RG pieces. Second, incoming

14   processing at P&DCs typically commingles parcel products, and the MODS 37x

15   operations are not representative of automated incoming FCPS processing. I compute

16   the other productivities for incoming and outgoing automated parcel processing using

17   the methodology from ACR folder USPS-FY21-23. Labor productivity for P&DC manual

18   parcel operations, from USPS-FY21-23, is incorporated in the (unmodified) USPS-

19   FY21-NP15 models. P&DC-processed PSG and RG are assumed to be dispatched

20   primarily in pallet boxes and wiretainers, with some use of APCs and OTRs.

21   While RG pieces follow the same mailflows as PSG pieces entered at origin

22   delivery units, it is not possible to distinguish machinable RG from non-machinable

23   (NMO) for the mail processing models. I estimate the RG cost differential as follows.

1   First, I adjust the PSG entry profile for both the current and future mailflows to 100

2   percent origin DU entry and compute the resulting unit mail processing costs from the

3   PSG model. I use RG values where possible in place of PSG values for volume-related

4   model inputs.[2] I scale the adjusted PSG model unit cost based on current mailflows to

5   piggybacked FY 2021 RG unit mail processing costs, similar to the application of the

6   proportional factor in the USPS-FY21-NP15 model costs. I use the resulting

7   proportional factor to adjust the estimated RG costs under the planned mailflows.

8   The estimated change in PSG mail processing cost is a reduction of $14.9 million

9   based on FY2021 PSG volume. For RG, mail processing cost is estimated to decline

10   by $17.1 million using FY2021 RG volume. The total mail processing cost impact is a

11   reduction of $31.9 million for both PSG and RG.[3] Please see folder USPS-N2022-

12   1/NPx for details of the calculations.

13   **ii. Transportation Cost Changes**

14   As noted above, transportation cost impacts arise from transportation mode shifts

15   for portions of FCPS, PSG, and RG volumes. The cost impact is calculated as the

16   change in transportation cost per cubic foot from the mode shift, multiplied by the total

17   cubic feet of mail subject to the shift.

18   For FCPS, the mode shift is from commercial air transportation to FedEx Day

19   Turn. Commercial air costs are weight-based, whereas FedEx Day Turn costs are

20   based on cubic volume; neither cost is distance-related. To calculate the cost

21   differential, I obtain commercial air cost per pound for FY2021 and divide by average

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[2] Since RG volume data do not distinguish machinable from non-machinable RG volumes, I retain the PSG machinable/non-machinable mix as a proxy.
[3] Note that total impacts reported here and below may differ from the sums of product-level impacts due to rounding.

1 pounds per cubic foot for FCPS to obtain the equivalent cost per cubic foot. I obtain the

2 FedEx Day Turn cost per cubic foot and apply the cost differential to the estimated cubic

3 feet of FCPS requiring FedEx Day Turn transportation under the planned standards.

4 The mode shift is estimated to increase FCPS cost by $31.6 million.

5   For PSG and RG, the required mode shift is from surface transportation to FedEx

6 Day Turn air transportation. The surface transportation unit costs per cubic foot are

7 distance-related (zoned), and costs based on Commission-accepted methodology are

8 obtained from ACR2021 folder USPS-FY21-NP16. The FedEx Day Turn unit cost per

9 cubic foot is the same as used in the FCPS calculation. The mode shift to air

10 transportation is estimated to reduce transportation costs for high-zone PSG and RG,

11 by $0.1 million and $4.6 million, respectively; the total cost change for both PSG and

12 RG is a reduction of $4.7 million. The result reflects relatively high costs for longer-

13 distance (high zone) surface transportation movements under accepted methodology.

14 The projected net transportation cost change is an increase of $27.0 million. The cost

15 impact calculations are provided in folder USPS-N2022-1-1 and USPS-N2022-1-NP3.

16 **II.   CONCLUSION**

17   The planned service standards' merging of PSG and RG with FCPS mailflows

18 will have small net impacts on the Postal Service's mail processing and purchased

19 transportation costs. Reduced touches in mail processing operations are estimated to

20 reduce costs by $31.9 million based on FY2021 cost and volume inputs. The estimated

21 effect on transportation cost is an increase of $27.0 million. The estimated impacts are

22 expected to reduce PSG and RG costs and thus enhance contribution from those

23 products. The impact on FCPS contribution, and the estimated net cost reduction of

24 $5.0 million, including mail processing and transportation cost impacts, are small.